

Appl. No.: 09/963,360  
Amdt. Dated: 10/18/2004  
Off. Act. Dated: 08/17/2004

### **REMARKS/ARGUMENTS**

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. **Allowable Subject Matter**

The Examiner is thanked for determining that Claims 59-61 are allowed and that Claim 31 would be allowable if rewritten in independent form. The Applicant has re-written Claim 31 and it should now be in condition for allowance.

2. **Rejection of Claims 36 and 55 under 35 U.S.C. §112, second paragraph.**

Claims 36 and 55 rejected under 35 U.S.C. §112, second paragraph as being indefinite. The Examiner states, "there is no antecedent basis for 'said spheres' recited..."

In response, Applicant has amended Claim 36 and Claim 55 to provide a proper antecedent basis for the spheres. Therefore, the Applicant respectfully submits that Claims 36 and 55 are now cast in proper form under 35 U.S.C. § 112.

3. **Rejection of Claims under 35 U.S.C. § 102(b).**

Claims 19, 24, 30, 36, 62, 64 and 68 were rejected under 35 U.S.C. § 102(b) as being anticipated by a *Scott et al* (U.S. No. 6,233,844 B1), a newly cited reference. In support of the rejection, the Examiner stated, "Note that the limitation 'a support substrate' recited in claims 19, 30 and 62 reads on the foraminous support 56 of Scott having a plurality of spaced-apart flights for use in separating and supporting particulate food products." Scott discloses a stationary perforated table where heated air is forced through the perforations. Endless chains separated by vanes are used to move the material across the perforated table. Scott does not disclose a conveyor, a particulate support or ultrasound.

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In response to the rejection, the Applicant has amended independent Claims 19, 25, 30, 40, 49 and 62 to include limitations that are not found in the Scott reference. In particular, each of these claims has been amended to include the limitation of "a particulate support substrate" configured to separate pieces of food product." Such structure is not present in the reference cited by the Examiner. Therefore, the Applicant respectfully submits that Claims 19, 25, 30, 40 and 62, as well as the claims that depend therefrom, recite one or more elements not found in the cited reference and are not anticipated by the Scott reference.

4. Rejection of Claims under 35 U.S.C. § 103(a).

A. Rejection of Claims 20-22, 32-33, 36, 38-39 and 65-67 under 35 U.S.C. § 103(a).

Claims 20-22, 32-33, 36, 38-39 and 65-67 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Scott (U.S. 4,419,834) in view of Juarez *et al* (U.S. No. 6,233,844 B1). The rejected claims are dependents of either independent Claim 19, Claim 30, or Claim 62. In support of the rejection the Examiner states: "Scott is silent to the teaching of an ultrasound source configured to expose the food products to ultrasonic waves. Juarez *et al* show the conventional expedient of guiding a hot gas stream over solid food products to be dehydrated and simultaneously subjecting the products to ultrasonic waves...."

Applicant respectfully disagrees that the claimed invention is disclosed in Juarez or a combination of Juarez and Scott and that there is no suggestion, incentive or motivation to combine these patents. However, Claim 20 has been canceled.

Initially, it should be noted that the combination proposed by the examiner does not provide all of the elements and limitations of the claims as amended. Neither Scott nor Juarez disclose a "particulate substrate" that "separates and supports" pieces of material to be dried. The perforated table of Scott neither "supports" nor "separates" the material during use. (See Scott Col. 4, lines 55-64.)

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It should also be emphasized that Juarez discloses an apparatus where the ultrasound source is in *direct contact* with the food and *compresses* the food during processing. Juarez includes a plurality of ultrasonic diffusers configured like plates (5) that are connected to sound wave generators (17) and are in direct contact with the food products. At Col. 2, lines 13-17 of Juarez, it states:

"[T]his object is achieved by the fact that ultrasonic waves are diffused in the product by an intermediary of vibrating plates which are *put in direct contact with the products*. Preferably, a static pressure is exerted on the products by these plates." (emphasis added)

The food product is actually compressed by the static pressure exerted by the plates (5) during dehydration. At Col. 4, lines 23-27 of Juarez it provides:

"Due to the continuous or even increasing static pressure as dehydration is carried out, the contact between diffusing plates 5 and the pieces remains guaranteed and the pieces are gently *compressed into the shape* of the flat disks." (emphasis added) (See also FIG. 6)

The Applicant submits that the apparatus disclosed in the Juarez patent could not be modified alone or be combined with Scott to produce the invention as claimed in claims 20-22, 32-33, 36, 38-39 and 65-67 because of these limitations. In particular, the ultrasonic plates (5) could not be brought in contact with the materials on the substrate or *compress* the materials as disclosed in Juarez. There is no incentive or motivation to combine the teachings of the two patents because the Scott apparatus would not function as intended if it were modified with plates that contact and compress the material. Likewise, there is no motivation to add the chain/vane elements that moves floating material across a stationary perforated table to Juarez because these structures would interfere with the compression/ultrasound plates and not function.

Accordingly, claims 21-22, 32-33, 36, 38-39 and 65-67 recite structure that is patentable over the cited references for purposes of 35 U.S.C. § 103.

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**B. Rejection of Claims 35, 37 and 63 under 35 U.S.C. § 103(a).**

Claims 35, 37 and 63 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Scott* in view of *Ware*. In support of the rejection of these claims the Examiner stated, "It would have been obvious to provide the conveyor of *Scott* with a plurality of spheres during the drying operation..."

The Applicant respectfully disagrees and submits that there is no incentive provided in either the *Scott* patent or *Ware*, the Applicants prior patent, to combine the patents to have two different "support substrates" (table and spheres) in combination as suggested by the Examiner. In addition, the combination proposed by the examiner would knock all of the material to be dried off of the spherical substrate during use thereby causing inconsistent drying conditions. This is a disincentive to make the proposed combination.

**C. Rejection of Claims 25-27, 29, 40-42, 47-51 and 56-58 under 35 U.S.C. § 103(a).**

Claims 25-27, 29, 40-42, 47-51 and 56-58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Scott* in view of *Juarez*.

Initially, it should be noted that the proposed combination does not disclose a "particulate support substrate" as claimed in the independent Claims 19, 30, 40 and 49. Accordingly, there is at least one element that is not provided by the proposed combination.

Furthermore, there is no incentive to make the proposed combination because some of the essential elements of two patents are not compatible. As discussed above, *Juarez* discloses a plurality of plates (5) that are in contact with the pieces of food and emit ultrasonic energy as well as compress the pieces. This structure is incompatible with the perforated table and the sweeping paddles of *Scott*.

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In addition, Juarez does not disclose a frequency range or a time of exposure. Since neither the apparatus of Scott nor Juarez can be modified to process food pieces on a substrate as claimed in the independent claims, the claims are not obvious in view of Scott and Juarez.

Accordingly, claims 25-27, 29, 40-42, 47-51 and 56-58 recite structure that is patentable over the cited references for purposes of 35 U.S.C. § 103.

**D. Rejection of Claims 44-46, 53 and 55 under 35 U.S.C. § 103(a).**

Claims 44-46, 53 and 55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Scott* in view of *Juarez* and further in view of *Ware*. In support of the rejection of these claims the Examiner stated, "It would have been obvious to provide the conveyor of Scott with a plurality of spheres during the drying operation..."

As indicated above, the Scott and Juarez patents are incompatible and therefore cannot be combined. The Examiner noted that the perforated table of Scott was considered to be a "substrate" that "supported" and "separated" food particles. However, the Applicant submits that there is no incentive provided in any of the referenced patents to add a second "support substrate" (spheres) to the perforated table of Scott as suggested by the Examiner.

In addition, the combination proposed by the examiner would knock all of the material to be dried off of the spherical substrate during use thereby causing inconsistent drying conditions and results. This is a disincentive to make the proposed combination.

Applicant submits that the proposed combination of Scott, Juarez and Ware would not meet all of the limitations of the claims and that there is no motivation or incentive to make the combination.

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5. Conclusion.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

The Applicant also respectfully requests a telephone interview with the Examiner in the event that there are questions regarding this response, or if the next action on the merits is not an allowance of all pending claims.

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Respectfully submitted,



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